

VIA ATR
(Specify Air or Sea Pouch)

DISPATCH NO.

25X1

~~SECRET~~
CLASSIFICATION

6 MAY 1955

TO :
Attn :
FROM :

~~CONFIDENTIAL~~

INFO: Chief,
Chief,
Chief,
SR/NA

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SUBJECT { GENERAL
 { SPECIFIC

Reference (a)

(b) DO 55-326

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1. Attached are two copies of a report of an analysis made on various components of a burial package which contained an agent radio, spare parts, tools, and money. The cache was exhumed in the agent on wirelessly instructions by his superior. The components of the package were submitted to the which produced the attached analysis. The group was instructed to examine and test the various items and essay to come up with estimates as to the origin of the material. This is all the information given them.

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2. Reference (a) transmitted the initial report to Chief, from , and reference (b) is a request from for an analysis of the materials.

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3. The attached 7 photographs depict the cache and contents. The total weight was 55 pounds and the overall demensions were 17 by 8 by 12 inches. As shown in Figure 1 the cache consisted of a rectangular box of zinc plate (21 BWG) with a money can, 4 inches long by 2½ inches in diameter, of tin plated steel (30 BWG) soldered to the top of the rectangular box. The top carrying handle is four inches long and made of brass. The handle plate is 7 by 2 by 5/16, also made of brass, and soldered to the can. Two lengths of Number 11 BWG copper baling wire are tied around the box at both ends of the handle for added strength. The tin plated money container appears to be a standard Japanese rice can. The box held the radio equipment and accessories, and consisted of two separate zinc boxes, one nesting inside the other. The space between the two boxes was filled with petrolatum for added waterproofing. The inner box measures 16¼ by 7½ by 11¼ inches. Each part of the radio equipment was separately wrapped with two sheets of wax paper.

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Page Two.

4. It was estimated that the cache had been in the ground for approximately three years. The condition of the radio set upon exhumation was excellent and it functioned perfectly upon assembly. This type of preparation of a cache is interesting in that the materials and packaging system are identical to that of a cache dug up under similar circumstances in a churchyard in Western Germany about 3½ years ago.

5. Attached for your information is the remainder of the materials of the original cache which were not used in the testing and analysis.

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Attachments:

- a. Analysis
- b. 7 Photographs
- c. Box containing materials (SAMPLES)

4 May 1955

Distribution:

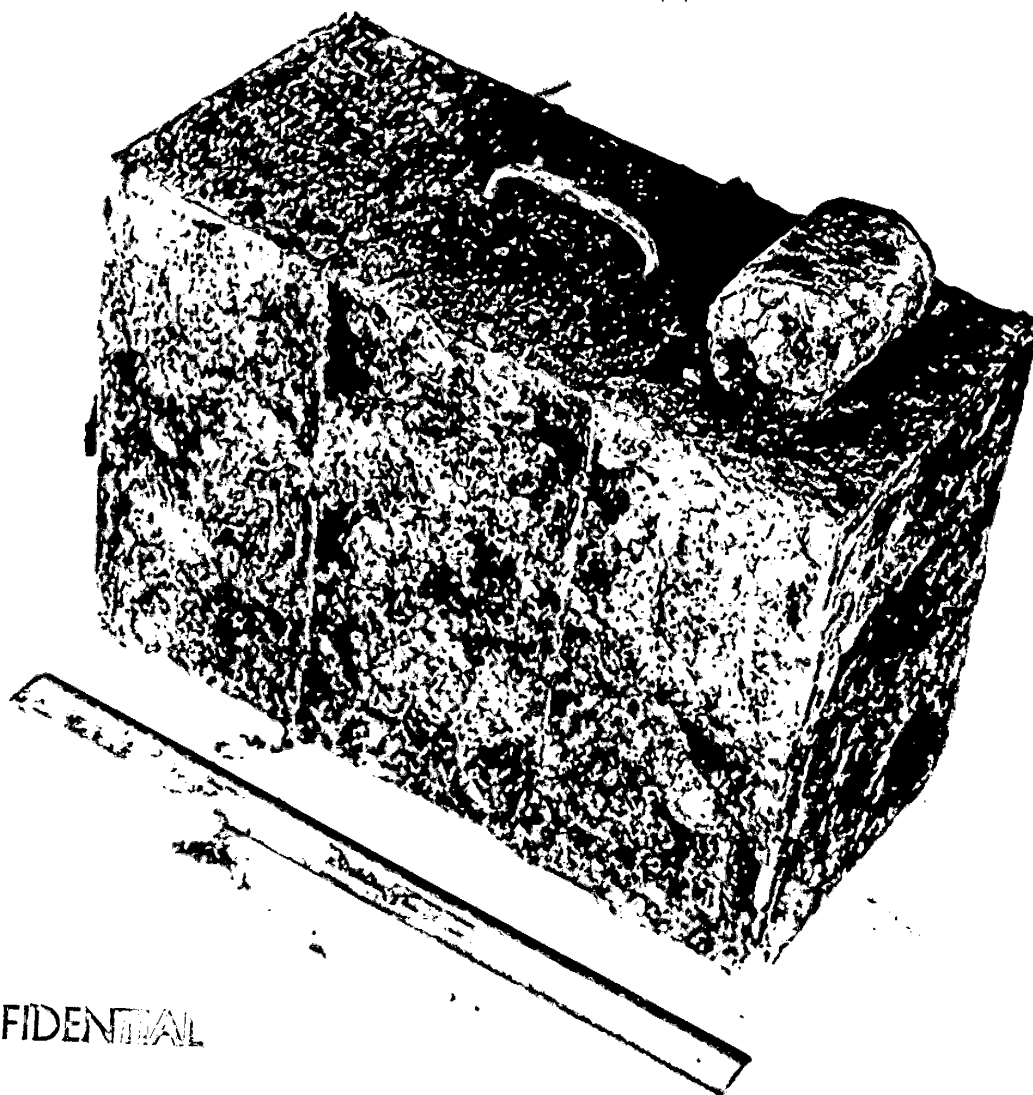
- 3 - Addressee (w/attch)
- 2 - Chief, FE (w/attch)
- 1 - Chief, [] NA (w/o attch)
- 1 - Chief, [] (w/attch)
- 1 - SR/NA (w/attch)

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Fig 1

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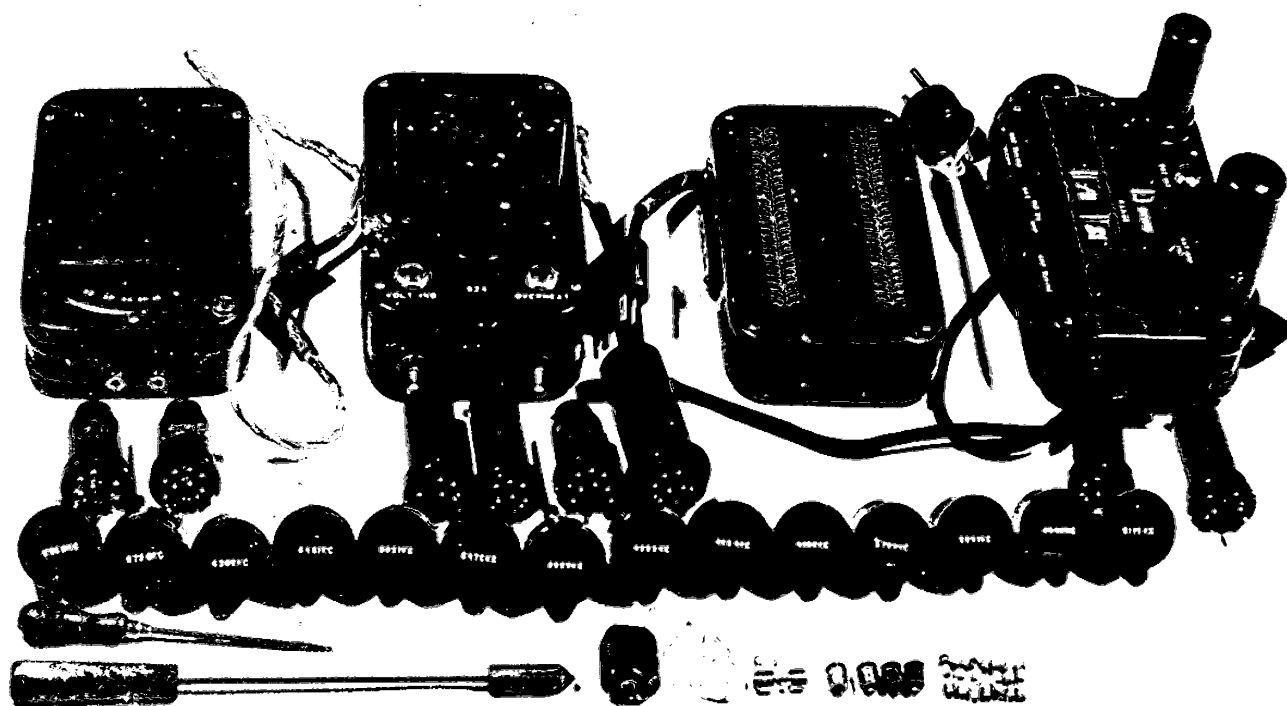
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Fig 3

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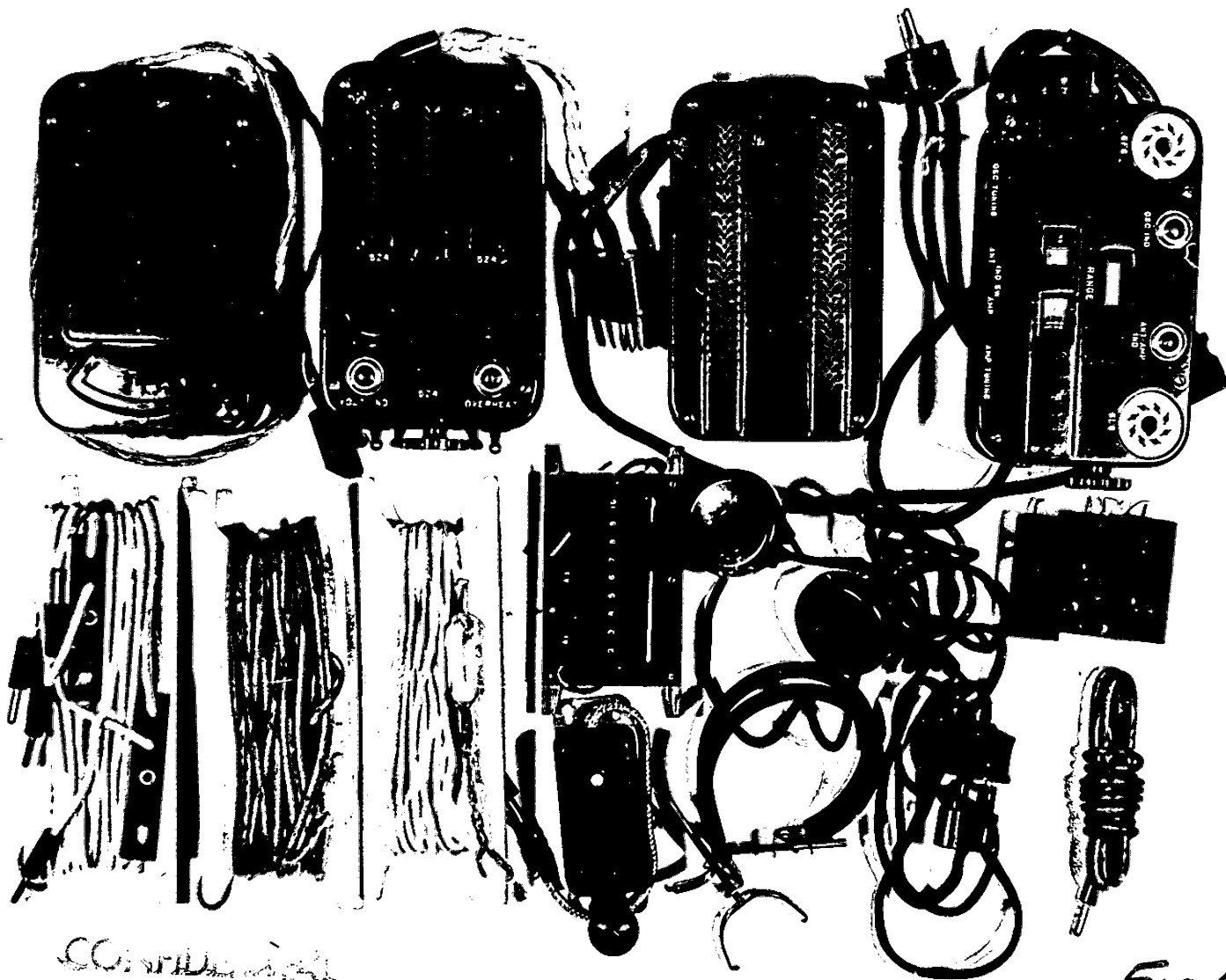


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Fig 4

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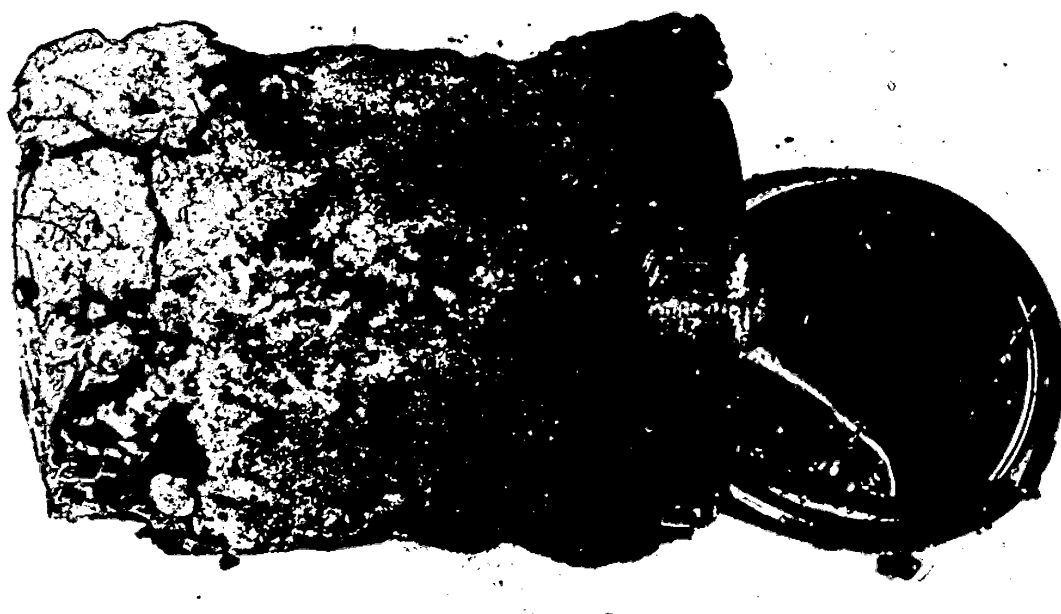


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Fig 5

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Fig 6

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Fig 7

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(4)
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ANALYSIS, OPINION, AND SUMMARY OF RESULTS CONCERNING
PACKING MATERIAL SUBMITTED

By



25X1

JANUARY 25, 1955

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Analysis, opinion, and summary of results concerning
packing material submitted

Contents consisted of wood, paper, paste, wire, can, brass hardware, etc.

Since an analytic conclusion was desired with respect to the above articles, it must be remembered that the component materials and the finished product may imply a very different conclusion.

It must also be borne in mind that later and possibly adventitious aspects of the submitted materials further increase the difficulty in making a clear statement.

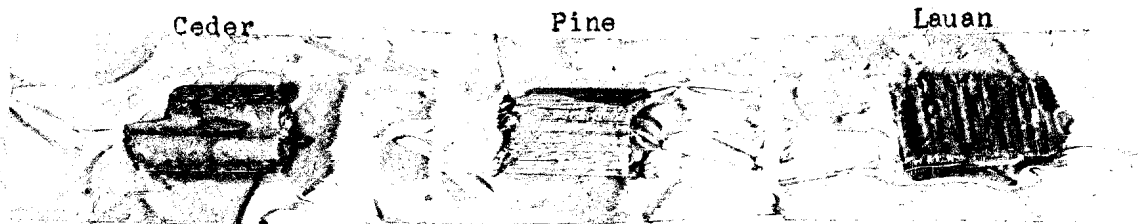
In this problem, do the included bits of wood in the greasy filler have a minor or major significance--or none at all? They separated the inner from the outer container.

Was this wood present at the very first, yes? What standard weight and measure apply Chinese, English, Russian, U.S.A.? Don't know. Any conclusion possible?

What Engineering or Munition Standard should be sought--and is it uniform, or a mixture of e.g. metric and English?

Analysis of wood:

Since all the wooden material was greasy, some error may be present in our conclusions. All wood was thoroughly cleaned with benzine, and the following was found:



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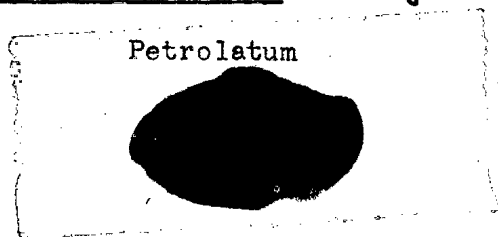
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- (a) One sample was pine wood.
- (b) Another was cedar wood coated with a dye material and shellack-
ed on one side.
- (c) A bit of plywood was Lauan wood, common in South East Asia and
the Philippines.

The thickness of this Lauan plywood is either 3 m.m. or 1/8".

I consider these wood fragments to be of minor significance, since
the sizes and shapes were irregular and seem to bear no relationship to
the remainder of the analysis samples.

I think that the man who broke (or opened) this can handled this
material with the wood and left it in this paste material. *No. The pieces of
wood were used as separators to keep the cans apart evidently so that
Analysis of water proofing material: the grease would penetrate over all the
spaces between the cans.*



There were two kinds of water proofing in the sample. The first was
the greasy material, the other an asphaltic dried film of some thickness.

A chemical reagent, specific gravity, ash measurement, and odor test
was then applied.

The chemicals used were:

Chloroform (CHCl_3), benzine, petroleum ether, carbon disulfide (CS_2),
benzene (C_6H_6), and ethyl alcohol ($\text{C}_2\text{H}_5\text{OH}$).

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Among these chemicals, chloroform, benzine, petroleum ether, carbon disulfide and benzene dissolved the pasty material.

Ethyl alcohol alone had very little solvent power.

Second test (specific gravity test):

Our sample floated on water, and therefore the specific gravity is lighter than water.

The rough value seems to be about 0.8 to 0.9. (S.g.)

Third test (measurement of water content):

This test is very important for the following reason.

Because, if we measure the water content it is to determine if the pasty material is either grease--which is a mixture of metal soap and a mineral oil--or petroleum, which is a residue of vacuum distillation of paraffin base of crude oil.

If it is grease, water content shows a fairly high value. On the other hand, if it is petrolatum, the water content does not show so high a value as in grease.

This factor largely differentiates grease from petrolatum.

Our tested result shows from 0.11% to 0.16%.

This value corresponds to petrolatum according to many standards.

Fourth test (measurement of ash content):

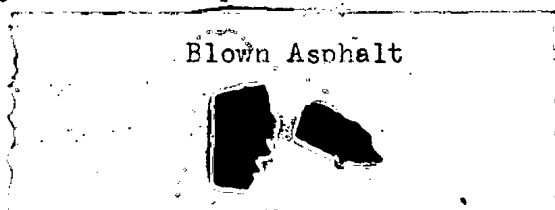
Ash content is also important. Since grease is a metal soap, then ash content is high when compared with petrolatum.

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Petrolatum shows a low value around 0.02%. Our measured value was 0.012%. It is probably petrolatum.

During the measurement of ash, we can perform a smell test, and the smell also indicated paraffin. The chemical reagent test also supported the probability that it is petrolatum.



Another kind of black, brittle, and hard mass which was coated on the metal plate surface was analyzed according to the previous sequence.

For the chemical reagent test, we used carbon disulfide (CS_2), trichlorethylene ($CHCl-CCl_2$), benzene (C_6H_6), and benzine.

In these chemicals, our sample dissolved very easily and the dissolved color was very dark almost black.

Second test (measurement of specific gravity):

This sample floated on water.

Ash content was very low and smell was that of pitch or blown asphalt. The measurement of specific gravity tells us that it is lighter than water, and it seemed to be blown asphalt which is a hard, friable solid obtained by blowing air at high temperature through mineral residual oils.

The method state was the same as asphalt. The chemical reagent test also indicated that it is a petrolatum pitch material. From this test, we conclude that:

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It is blown asphalt (petrolatum pitch); and we also conclude that all water proofing materials were of petrolatum base origin.

Analysis of packing or wrapping materials:

We need to pay much attention to those items because paper and wrapping material is not only a raw material, but it is also a product which has a close relationship to our daily life.

When compared with other goods, paper contains many important clues.

Type of paper, sheet size, screen mark and felt mark of paper, sizing material, loading material, fiber components, impurities etc. all are related to the above remarks.

To determine each of the above factors is rather difficult. We can not solve all these factors at the same time. We can not expect that a given sample will display each of these characteristics. Then the most important factors only come under our consideration.

Cotton content:

Cotton



Fiber analysis tells us that it contains cotton with some seed hull.

Its fiber length is not so long.

Next is a gray paper.



80% Sulphite pulp of soft wood

20% Ground pulp

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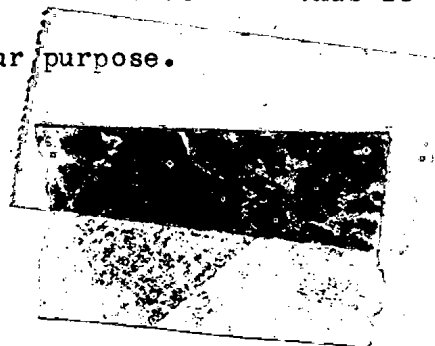
-6-

This is a very poor sized paper containing 80% of sulphite pulp of soft wood and 20% of ground pulp. Paper also contains some fragrant bits of bark, and is of poor quality.

Among samples of Russian paper we have in stock some are almost the same as those of the submitted material. In these samples, we can find almost the same paper--namely, mixed fiber components, tinted color--which is pale grayish blue, and the impression we receive from this paper is very very close to those from our sample. Analyzer believes that this is one of the most important points found regarding our purpose.

Next is a brownish white paper.

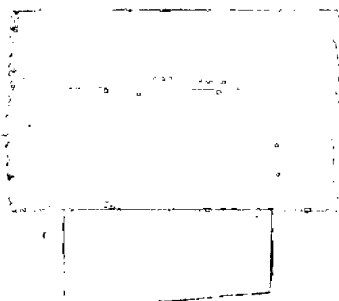
Bleached Kraft



This paper is made of triple warp weave screen. We can sometimes find paper with such a screen mark in our job.

This paper is made of bleached kraft or well cooked kraft pulp. The feeling which one receives from this paper differs from that of Japanese paper.

Next is a white paper with a fiber analysis of 100% of sulphite pulp of soft wood.



100% Sulphite pulp of soft wood

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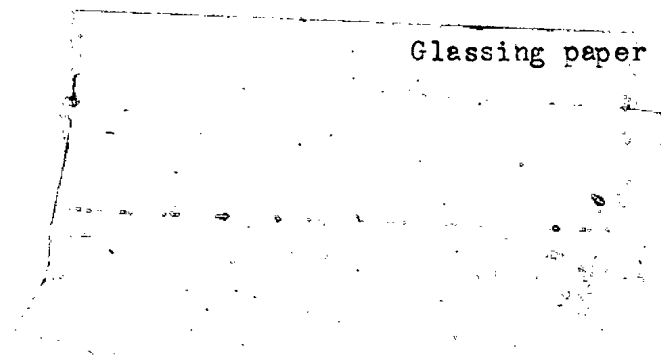
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Rosin sizing is used in this paper. In our reference stock, we can find almost the same quality paper.

Next is a semi transparent paper which is a mixture of 97%-98% sulphite pulp of soft wood and 2%-3% of ground pulp.

This paper contains quantities of impurities. One original trimmed side remains and its width is approximately 29.5 inches, when we use the inch system. Paper weight which is calculated from this measurement corresponds to (24'x34'--500).



97%-98%

Sulphite pulp of soft wood

2%-3%

Ground pulp

This paper belongs to the category of glassing papers. The feeling which we receive from it is not so elegant but rather one of coarseness and roughness.

Next is the last paper.



90% Ground pulp

10% Sulphite pulp

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This paper is a rough paper with a fiber of mixture of 90% of ground pulp and 10% of sulphite pulp of soft wood..The analyzer makes the following conclusions.

These papers or wrapping papers do not contain any special raw materials, and at the same time did not receive any special treatment. This paper is ordinary commercial production.

Paper is rather coarse or rough. The analyzer thinks that a socialistic state and countries which have an influence of socialistic policy tend toward this type of paper production.

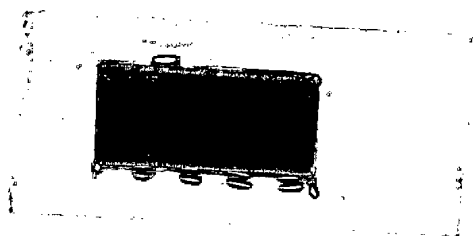
Analysis of metal part.

For the analysis of various metal goods a generally normal chemical technique was used. Diameter, length of each part, screw pitch, etc., were of course all measured. After analysis of various elements, we drew some conclusions as follows:

1. Analysis of the largest metal item.

This metal consisted of Zinc only. Other metal could not be found. This plate is zinc plate which has a thickness of 75/100 m.m.-81/100 m.m. This thickness corresponds to the number (21) of B.W.G. (Birmingham Wire Gauge Standard) and S.W.G. (Imperial Standard Wire Gauge)

Zinc plate



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2. Analysis of cylindrical can.

Chemical analysis of this can tells us that it is made of tin and iron. Namely, the body of this can is iron plate on which tin plating is deposited.

Thickness is about 30.5/100 m.m. This thickness just corresponds to number (30) of B.W.G. (Birmingham Wire Gauge Standard)

Tin plating (Inside iron, surface tin)



3. Analysis of copper wire.

This wire is made of an alloy of copper, zinc and nickel.

The diameter of this wire shows about 3 m.m. This value just corresponds to number (11) of B.W.G. (Birmingham Wire Gauge Standard)

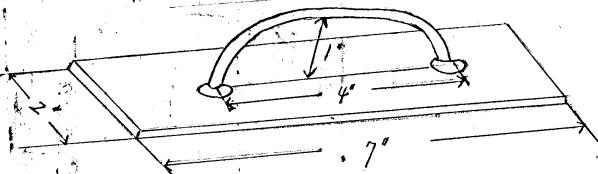
Copper Wire (Copper, zinc, and nickel)



4. Analysis of brass hardware handle.

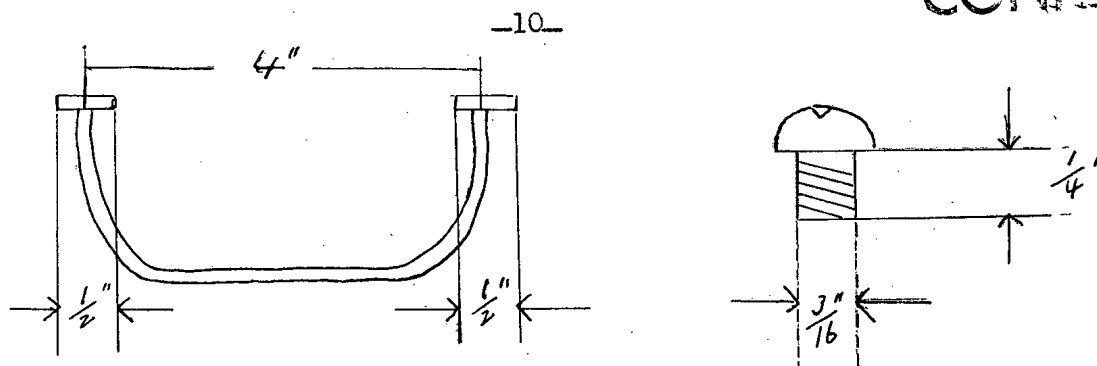
Brass hardware

(Copper, zinc and tin)



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This copper alloy is made of a mixture copper, tin and zinc.

This component is a common alloy for such goods.

We found two round head screws on this grip and its base. Upon checking these screws we find that they have a diameter of $3/16$ " with a thread number #24 (threads per inch).

Each parts of the grip and its base were measured, and the following data obtained. (See Figure)

The analyzer believes that the inch system was used on each parts in manufacture.

Regarding the above analysis, thickness of metal plate, diameter of wire, and attached screw elements all correspond to Birmingham wire gauge, and Imperial standard gauge.

The analyzer points out that these standards are most commonly used in United Kingdom and U.S.A..

Summary of conclusions:

It is difficult to draw definite conclusions from these results which will give definite information for our purposes; but the analyzer naturally formed certain opinions throughout the testing as noted below.

All the materials which were used in the sample goods did not point

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to one country alone, but undoubtedly were brought from other countries also. The analyzer definitely believe that these materials were constructed as one object with one intended purpose.

Certainly a Marxist Socialistic state (Soviet Union), or a country which received alike influence of policy (such as Red China) constructed this one object, after the gathering together of the necessary materials.

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